

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 21-40 are now pending in this application.

Applicants wish to thank the Examiner for the careful consideration given to the claims.

Rejection of claims 1-20 based on 35 U.S.C. 112

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, for various informalities. Claims 1-20 have been canceled, which renders the rejection of these claims moot. Favorable reconsideration of the rejection is respectfully requested.

Rejection of claims 1-20 based on the prior art

Claims 1-20 have been canceled, which renders the prior art rejections of claims 1-20 moot. For at least this reason, favorable reconsideration of the prior art rejections of claims 1-20 is respectfully requested.

Allowability of claims 21-40

New claim 21 recites, among other things, an air-conditioning system for a motor vehicle comprising a refrigerant circuit with a plurality of heat exchangers through which a refrigerant can be passed. One of the heat exchangers is simultaneously part of a coolant circuit. The refrigerant circuit is capable of a heating mode, and the refrigerant circuit comprises a first set of parts which are inoperative in the heating mode and a second set of parts which are active in the heating mode. The refrigerant circuit is configured such that refrigerant recirculation from the first set of parts into the second set of parts is provided on demand in a refrigerant recirculation mode. The refrigerant circuit is configured to disconnect the one of the heat exchangers from inflow of coolant flowing in the coolant circuit for the refrigerant recirculation mode. Claim 30 recites similar and/or analogous features in relation to a method claim. None of the cited prior art teaches or suggest this combination of features.

For instance, EP 1,295,739 (“Rogstam”) merely discloses an outside heat exchanger 110 that is not active in the heat pump loop and is connected to the low pressure part of the heat pump loop such that, upon starting in the heat pump mode, a non-return valve is opened to allow refrigerant to flow from the outside heat exchanger to the heat pump loop as long as

the pressure inside the outside heat exchanger is higher than on the suction side of the heat pump loop. (Paragraphs 0022-0023 of Rogstam.) Rogstam does not teach or suggest a refrigerant circuit that is configured to disconnect a heat exchanger from inflow of coolant flowing in the coolant circuit for the refrigerant recirculation mode.

U.S. Patent 6,041,849 (“Karl”) discloses a circuit in which fluid in a branch 2 is aspirated by the compressor 4 by a closing valve 12. (Column 4, lines 32-47 of Karl.) Refrigerant recirculation does not involve disconnecting a heat exchanger from the inflow of coolant flowing in a coolant circuit.

U.S. Patent 4,616,484 (“Mehdi”) merely discloses a refrigerant heating and cooling system which uses a refrigerant-to-engine coolant heat exchanger 44. (Column 4, lines 1-10 of Mehdi.) Mehdi does not teach or suggest refrigerant recirculation that involves disconnecting a heat exchanger from the inflow of coolant flowing in a coolant circuit. As a result, no combination of Karl and Mehdi teaches or suggests refrigerant recirculation that involves disconnecting a heat exchanger from the inflow of coolant flowing in a coolant circuit.

U.S. Patent 5,694,780 (“Alsenz”) does not cure the deficiencies of Rogstam, Karl, or the combination of Karl and Mehdi because Alsenz merely discloses a cylinder head temperature sensor 39.

U.S. Patent 5,419,149 (“Hara”) does not cure the deficiencies of the combination of Karl and Mehdi because Hara merely discloses a flow chart for an interruption routine for determining an opening time of a switch valve in a heat pump type air conditioner.

Official Notice that many pressure regulator valves close when the flow through them stops does not cure the deficiencies of the Rogstam, Karl, the combination of Karl and Mehdi; the combination of Rogstam and Alsenz; the combination of Karl and Alsenz; the combination of Karl, Mehdi, and Alsenz; and the combination of Mehdi, Karl, and Hara. Furthermore, such Official Notice is improper as grounds for a rejection because no prior art has been set forth providing such a teaching in relation to the other features contained in claims 15-16.

U.S. Patent 3,738,119 (“Scherer”) does not cure the deficiencies of Rogstam, Karl, the combination of Karl and Mehdi; the combination of Rogstam and Alsenz, the combination of Karl and Alsenz; the combination of Karl, Mehdi, and Alsenz; the combination of Mehdi, Karl, and Hara; the combination of Rogstam and Official Notice, Karl and Official Notice, the combination of Karl, Mehdi, and Official Notice; the combination of Rogstam, Alsenz,

and Official Notice, the combination of Karl, Alsenz, and Official Notice; the combination of Karl, Mehdi, Alsenz, and Official Notice; and the combination of Mehdi, Karl, Hara, and Official Notice. Scherer merely discloses an expansion valve that will open as the evaporator outlet pressure falls.

Accordingly, none of the cited prior art teaches or suggest all the features of claim 21 or claim 30 and their respective dependent claims.

Allowance of claims 21-40 is respectfully requested.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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